IPW

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Mark S. Moir et al.

Title: SOFTWARE TRANSACTIONAL MEMORY FOR DYNAMICALLY SIZABLE SHARED DATA STRUCTURES

Application No.: 10/621,072 Filed: July 16, 2003

Examiner: Mano Padmanabhan Group Art Unit: 2188

Atty. Docket No.: 004-8428

September 27, 2004

Mail Stop Amendment
COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT
37 C.F.R. § 1.97(b)

Dear Sir:

Pursuant to 37 C.F.R. § 1.56, § 1.97 and § 1.98, the undersigned brings the patents, publications, applications or other information identified in the attached:

☒ Form(s) PTO-1449 (2 pages), including copy(ies) of 33 reference(s).
☐ Other: n/a

to the Examiner's attention in the above-identified application. Citation of such information shall not be construed as:

1. an admission that the information necessarily is, or corresponds to, prior art with respect to the instant invention;
2. a representation that a search has been made, other than as described below; or
3. an admission that the information cited herein is, or is considered to be, material to patentability as defined in § 1.56(b).

Pursuant to 1276 OG 55 (August 5, 2003), Information Disclosure Statements may be filed without copies of U.S. Patents and Published Applications in Patent Applications filed after June 30, 2003.

For each item of information listed that is not in the English language, the undersigned has provided a concise explanation of the relevance through (i) an English language abstract, (ii) an English language equivalent application, or (iii) if cited in a search report or other action

by a foreign patent office in a counterpart foreign application, an English language version of the search report or action that indicates the degree of relevance found by the foreign office.

FEE AUTHORIZATION

☐ This Information Disclosure Statement is filed within three months of the filing date of a national application other than a continued prosecution application under § 1.53(d) or within three months of entry of the national stage as set forth in § 1.491 in an international application. Therefore, no fee is required.

☒ The undersigned believes that this Information Disclosure Statement is being filed before the mailing date of a first Office action on the merits or before the mailing date of a first Office action after the filing of a request for continued examination under § 1.114. Therefore, no fee is believed required.

If however, this Information Disclosure Statement is filed after the period specified in § 1.97(b), the undersigned hereby authorizes the Commissioner to charge the fee set forth in § 1.17(p) to Deposit Account No. 50-0631.

CERTIFICATE OF MAILING OR TRANSMISSION

I hereby certify that, on the date shown below, this correspondence is being

☒ deposited with the US Postal Service with sufficient postage as first class mail, in an envelope addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

☐ facsimile transmitted to the US Patent and Trademark Office.

David W. O'Brien — 27-Sep-04 (Date)

EXPRESS MAIL LABEL: _____

Respectfully submitted,

David W. O'Brien, Reg. No. 40,107
Attorney for Applicant(s)
(512) 338-6314
(512) 338-6301 (fax)

U.S. Department of Commerce, Patent and Trademark Office	Attorney Docket No.:	004-8428
	Application No.:	10/621,072
INFORMATION DISCLOSURE STATEMENT BY APPLICANT	Applicant(s):	Moir et al.
(Use several sheets if necessary)	Filing Date:	July 16, 2003
	Group Art Unit:	2188
	Date Submitted:	September 27, 2004

NON PATENT LITERATURE DOCUMENTS

*Examiner Initial	Cite No.	(Including name of author in capital letters, title of article, title of item, date, pertinent pages, volume-issue number(s), publisher, city and/or country where published.)
	1	Afek, Yehuda et al., "*Long-Lived Renaming Made Adaptive*", 18th Annual ACM Symposium on Principles of Distributed Computing, pages 91-104, 1999.
	2	Afek, Yehuda, "*Wait-Free Made Fast*", 27th Annual ACM Symposium on Theory of Computing, pages 538-547, 1995.
	3	Agesen, Ole et al., "*DCAS-Based Concurrent Deques*", 12th Annual ACM Symposium on Parallel Algorithms and Architectures, pages 137-146, July 2000.
	4	Anderson, James H. et al., "*Using Local-Spin k-Exclusion Algorithms to Improve Wait-Free Object Implementations*", 12th Annual ACM Symposium on Principles of Distributed Computing, November 1995 (revised 1996, 1997).
	5	Arora, Nimar S. et al., "*Thread Scheduling for Multiprogrammed Multiprocessors*", 10th Annual ACM Symposium on Parallel Algorithms and Architectures, pages 119-129, 1998.
	6	Attiya, Hagit et al., "*An Adaptive Collect Algorithm with Applications*", Dept. of Computing Science, The Technion, Israel, May 10, 2001.
	7	Barnes, Greg, "*A Method for Implementing Lock-Free Shared Data Structures*", 5th Annual ACM Symposium on Parallel Algorithms and Architectures, pages 261-270, 1993.
	8	Bayer, R. et al., "*Concurrency of Operations on B-Trees*", Acta Informatica, 1977.
	9	Detlefs, David L. et al., "*Even Better DCAS-Based Concurrent Deques*", 14th International Conference on Distributed Computing, pages 59-73, 2000.
	10	Detlefs, David L. et al., "*Lock-Free Reference Counting*", 20th Annual ACM Symposium on Principles of Distributed Computing, pages 190-199, 2001.
	11	Dice, David et al., "*Mostly Lock-Free Malloc*", ACM 2002.ACM SIGPLAN International Symposium on Memory Management, June 2002.
	12	Greenwald, Michael B., "*Non-Blocking Synchronization and System Design*", PhD Thesis, Stanford University Technical Report STAN-CS-TR-1624, Palo Alto, California, August 1999.
	13	Herlihy, Maurice, "*A Methodology for Implementing Highly Concurrent Data Objects*", ACM Transactions on Programming Languages and System, pages 745-770, November 1993.
	14	Herlihy, Maurice, "*Dynamic-Sized Lockfree Data Structures*", Sun Microsystems Technical Report SMLI TR-2002-112, June 2002.
	15	Herlihy, Maurice et al., "*Linearizability: A Correctness Condition for Concurrent Objects*", ACM Transactions on Programming Languages and Systems, pages 463-492, July 1990.
	16	Herlihy, Maurice et al., "*The Repeat Offender Problem: A Mechanism for Supporting Dynamic-Sized Lock-Free Data Structures*", Sun Microsystems Technical Report SMLI TR-2002-112, June 2002.

Examiner	Date Considered

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with your communication to applicant.

U.S. Department of Commerce, Patent and Trademark Office	**Attorney Docket No.:**	*004-8428*
	Application No.:	*10/621,072*
INFORMATION DISCLOSURE STATEMENT BY APPLICANT	**Applicant(s):**	*Moir et al.*
(Use several sheets if necessary)	**Filing Date:**	*July 16, 2003*
	Group Art Unit:	*2188*
	Date Submitted:	*September 27, 2004*

NON PATENT LITERATURE DOCUMENTS

*Examiner Initial	Cite No.	(Including name of author in capital letters, title of article, title of item, date, pertinent pages, volume-issue number(s), publisher, city and/or country where published.)
	17	Herlihy, Maurice et al., "*Transactional Memory: Architectural Support for Lock-Free Data Str*uctures", 20th International Symposium in Computer Architecture, 1993.
	18	Herlihy, Maurice et al., "*Obstruction-Free Synchronization: Double-Ended Queues as an Example*", 23rd International Conference on Distributed Computing, May 2003.
	19	Israeli, Amos et al., "*Disjoint-Access-Parallel Implementations of Strong Shared Memory Primitives*", 13th Annual ACM Symposium on Principles of Distributed Computing, pages 151-160, 1994
	20	Lamport, Leslie, "*How to Make a Multiprocessor Computer that Correctly Executes Multiprocess Programs*", IEEE Transactions on Computers, September 1979.
	21	Luchangco, Victor et al., "*Nonblocking k-compare-single-swap*", 15th Annual ACM Symposium on Parallel Algorithms and Architectures, June 2003.
	22	Martin, Paul et al., "*DCAS-Based Concurrent Deques Supporting Bulk Allocation*", Sun Microsystems, Inc. Technical Report SMI TR-2002-111, October 2002.
	23	Michael, Maged M. et al., "*Non-Blocking Algorithms and Preemption-Safe Locking on Multiprogrammed Shared Memory Multiprocessors*", Journal of Parallel and Distributed Computing, March 1997.
	24	Michael, Maged M. et al., "*Simple, Fast and Practical Non-Blocking and Blocking Concurrent Queue Algorithms*", 15th Annual ACM Symposium on Principles of Distributed Computing, pages 267-276, 1996.
	25	Michael, Maged M., "*Safe Memory Reclamation for Dynamic Lock-Free Objects Using Atomic Reads and Writes*", 21st Annual ACM Symposium on Principles of Distributed Computing, pages 21-30, January 2002.
	26	Moir, Mark, "*Laziness Pays! Using Lazy Synchronization Mechanisms to Improve Non-Blocking Constructions*", 19th Annual ACM Symposium on Principles of Distributed Computing, 2000.
	27	Moir, Mark, "*Practical Implementations of Non-Blocking Synchronization Primitives*", 16th Annual ACM Symposium on Principles of Distributed Computing, 1997.
	28	Moir, Mark, "*Transparent Support for Wait-Free Transactions*", 11th International Workshop on Distributed Algorithms, 1997.
	29	Moir, Mark et al., "*Wait-Free Algorithms for Fast, Long-Lived Renaming*", Science of Computer Programming, August 1994.
	30	Saks, Michael et al., "*Optimal Time Randomized Consensus - Making Resilient Algorithms Fast in Practice*", 2nd ACM SIAM Symposium on Discrete Algorithms, pages 351-362, 1991.
	31	Shavit, Nir et al., "*Software Transactional Memory*", Distributed Computing, Special Issue (10), 1997.
	32	Trieber, R, "*Systems Programming: Coping with Parallelism*", IBM Technical Report RJ5118, April 23, 1986.
	33	Turek, John et al., "*Locking without Blocking: Making Lock Based Concurrent Data Structure Algorithms Nonblocking*", 11th ACM *SIGACT-SIGMOD-SIGART* Symposium on Principles of Database Systems, 1992.

Examiner	**Date Considered**

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with your communication to applicant.